TITOV, Konstantinatin Markovich; ZARUDNYY, N.N., otv. red.; MAZURKEVICH, M., red. izd-va; LEBEDEV, A., tekhn. red.

[Accounting for the clearing and credit operations of enterprises] Uchet raschetnykh i kreditnykh operatsii predpriiatii. Moskva, Gosfinizdat, 1962. 69 p. (MIRA 16:2)
(Banks and banking--Accounting) (Clearinghouse)

ZAHUDNYY, Nikolay Nikolayevich; SUMTSOV, A., otvetstvennyy red.; PROSHINA, L., red. izd-va; LEBEDEV, A., tekhn. red.

[Accounting for material assets in industry] Bukhgalterskii uchet material'nykh tsennostei v promyshlennosti. Moskva, Gosfinizdat, 1958. 191 p. (MIRA 11:7)

(Accounting)

SALISHCHEV, K.A.; ZAIUTSKAYA, I.P.

Geographical maps for higher schools. Izv.AN SSSR Ser.geog. no.4:95-100 Jl-Ag '53. (MLRA 6:8)

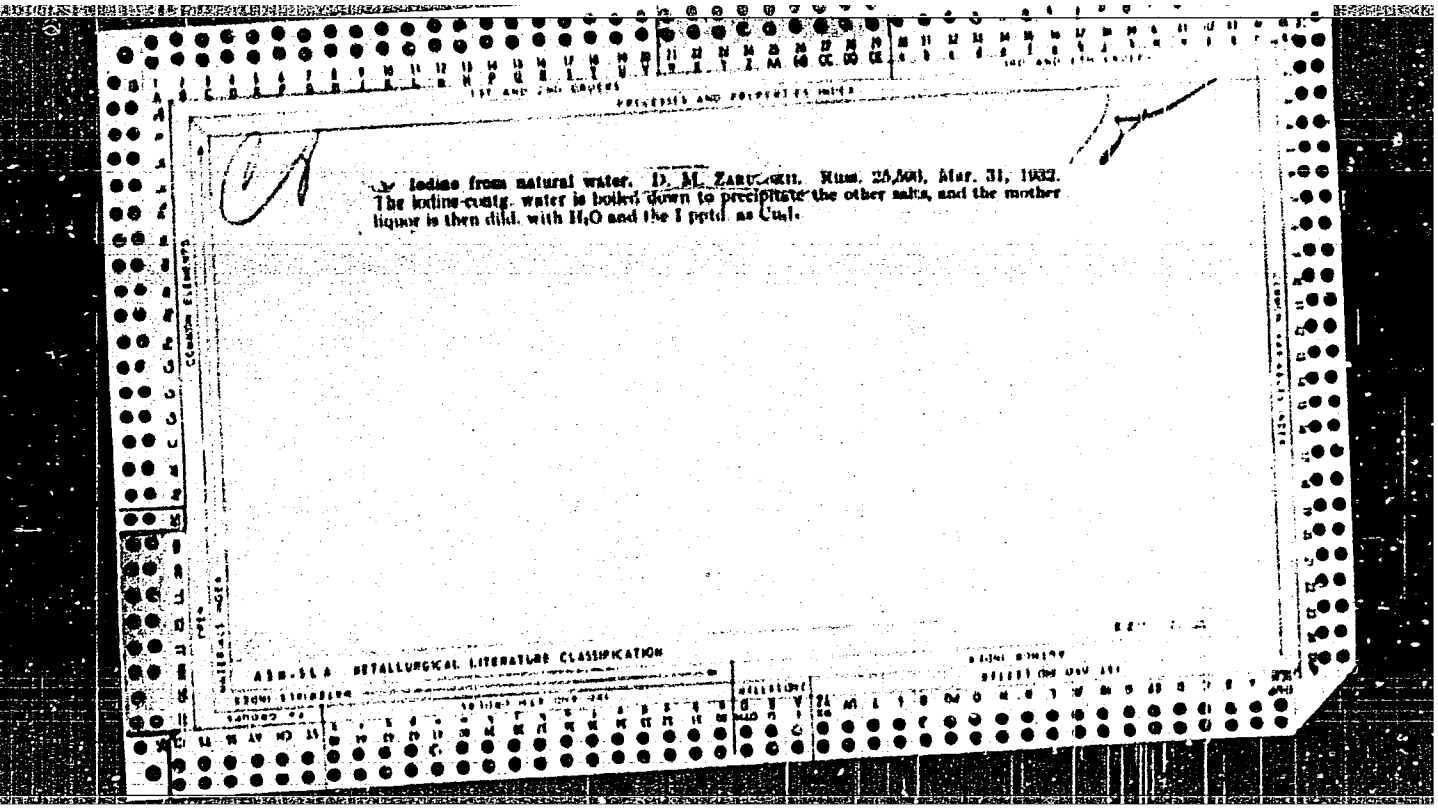
1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova, Kafedra kartografii. (Maps--Study and teaching)

BC

2-1

Electrolytes in clays. L. E. [illegible] (J. Appl. Chem., [illegible], 1931, 4, [illegible]–33).—The sp. conductivity of H_2O extracts of clays is given by $k = k_0 C^{[illegible]}$, where C is the wt. in g. of clay extracted with 100 c.c. H_2O, k is the conductivity at $C = 1$, and D is the proportionate decrease in conductivity when the clay : H_2O ratio is increased tenfold. The change in conductivity on evaporation is expressed by $E = k'C'^{[illegible]}$, where k' is the conductivity when the extract is conc. C' times. The amount of electrolytes adsorbed by clays is characterized by increase in D and is a measure of the "fitness" of the clay. CHEMICAL ABSTRACTS.

METALLURGICAL LITERATURE CLASSIFICATION



Iodine from natural water. D. M. Zaruchii. Russ. 25,801, Mar. 31, 1932. The iodine-contg. water is boiled down to precipitate the other salts, and the mother liquor is then dild. with H_2O and the I ppted. as CuI.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

PROCESSES AND PROPERTIES INDEX

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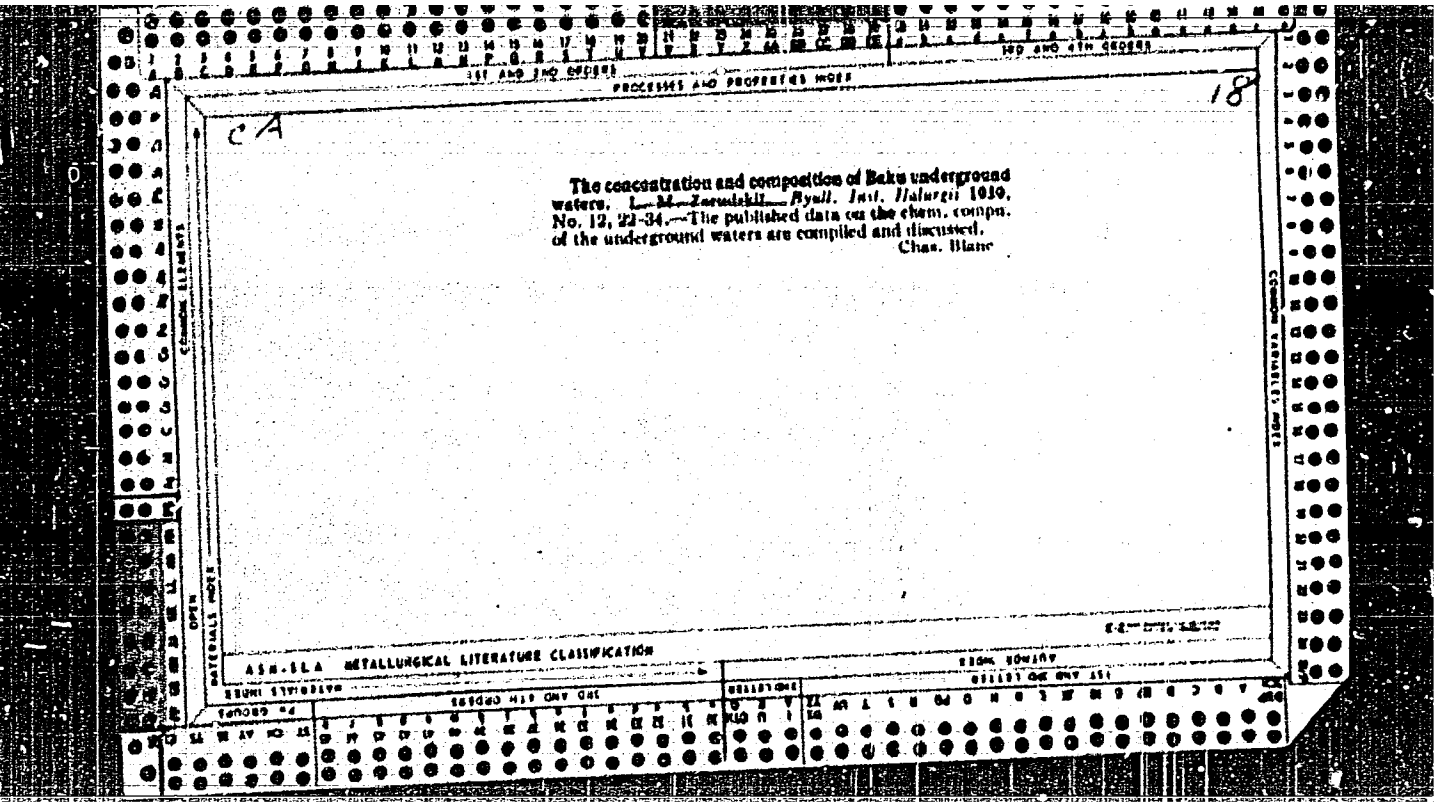
The Kerch boron problem. I. M. Zarudskii and B. Ya. Rozen. *Byull. Inst. Halurgii* 1938, No. 0, 42-63; *Khim. Referat. Zhur.* 2, No. 4, 45(1939).—Before the discovery of the Inder borate deposits (ascharite and hydroboracite) the Kerch deposits were the only com. source of B in U. S. S. R. The av. content of B_2O_3 is only 0.3-0.4%. The Inder deposits of borates contain 25-7% of B_2O_3. In spite of the relatively poor content of the borates in the Kerch deposits they still can be utilized under certain conditions.

W. R. Henn

METALLURGICAL LITERATURE CLASSIFICATION

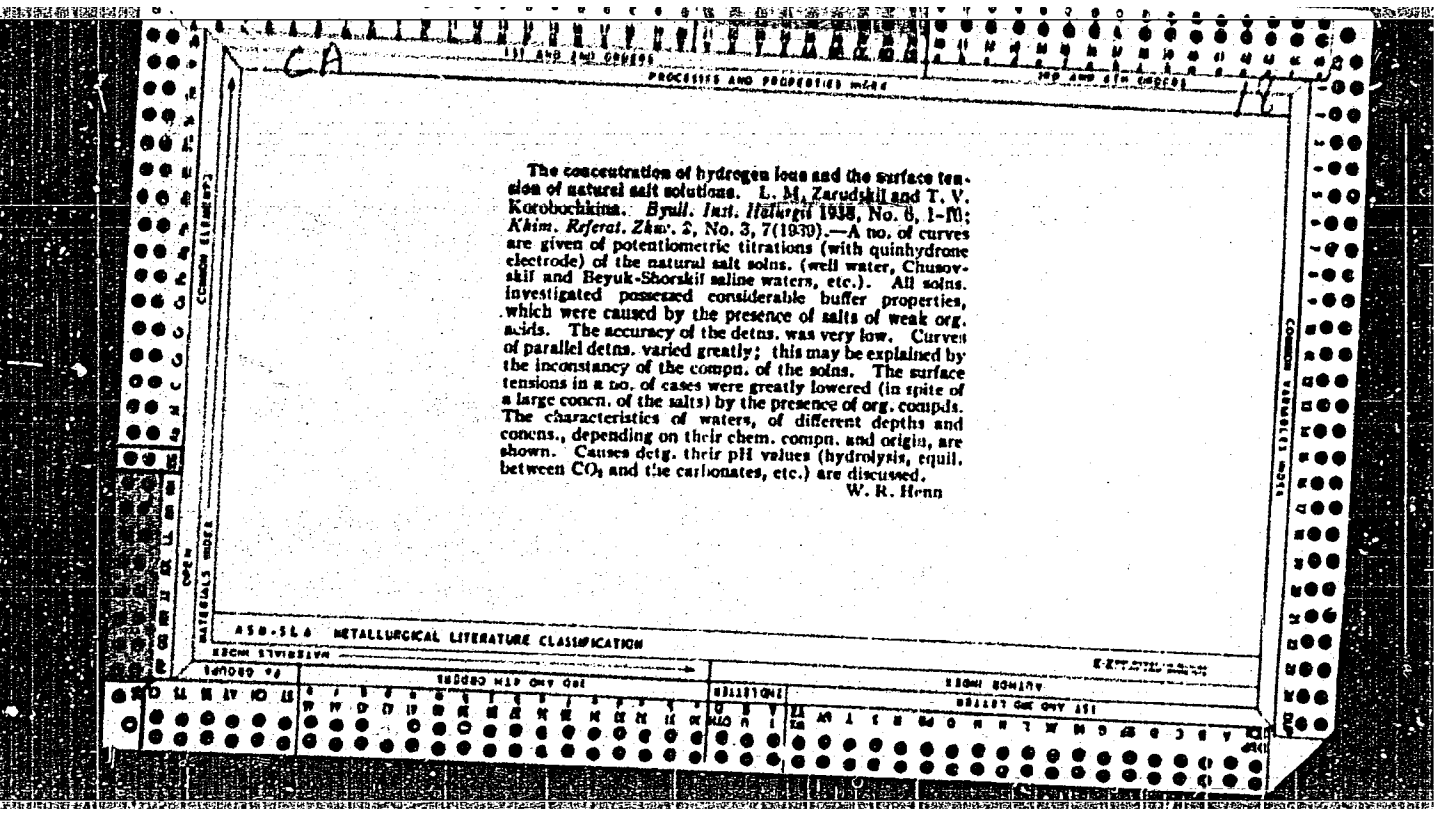


CA

18

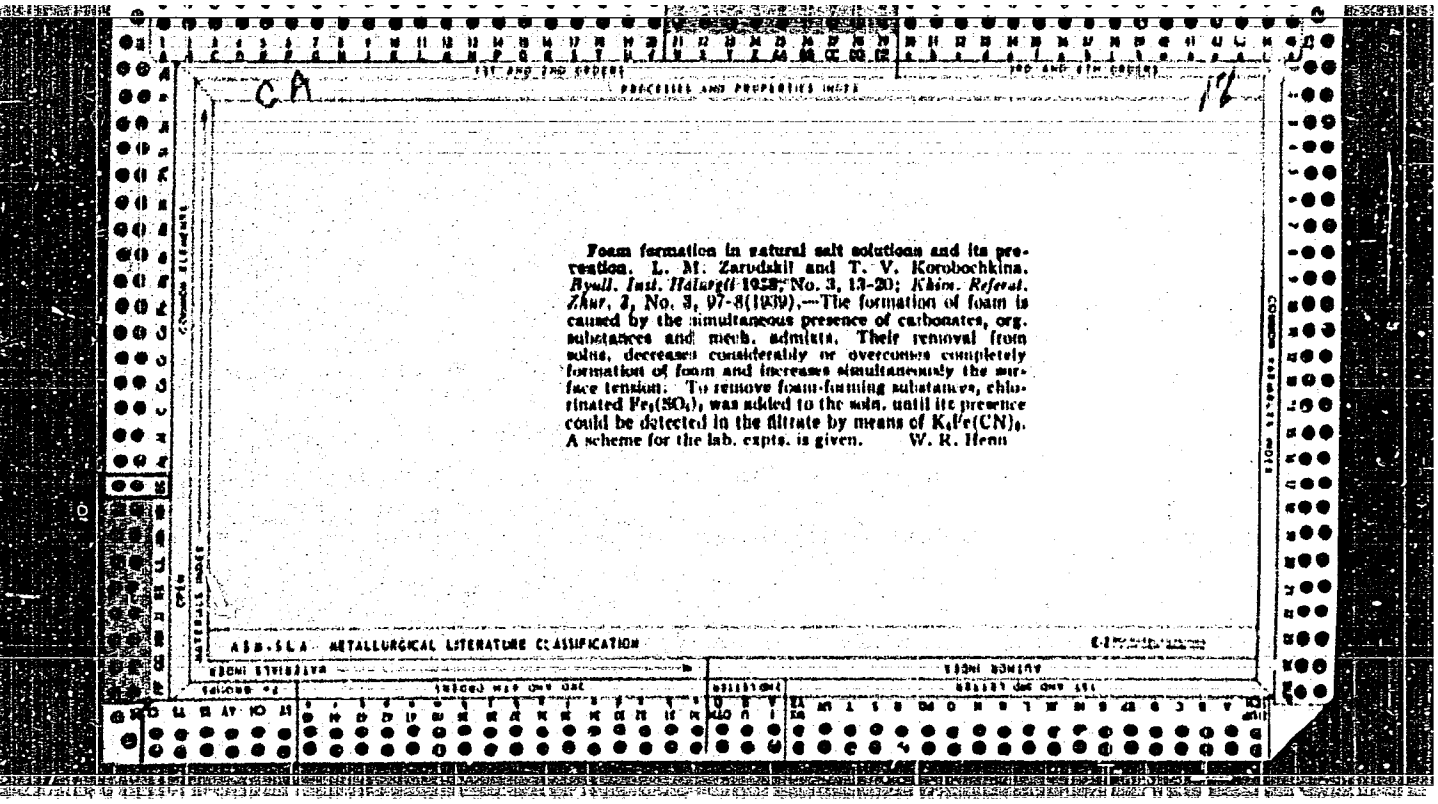
The concentration and composition of Baku underground waters. L. M. Zaruskii. *Ryull. Inst. Naftergii* 1939, No. 12, 22-34.—The published data on the chem. compn. of the underground waters are compiled and discussed.
Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The concentration of hydrogen ions and the surface tension of natural salt solutions. L. M. Zarudskiĭ and T. V. Korobochkina. *Byull. Inst. Metallurgii* 1938, No. 8, 1-11; *Khim. Referat. Zhur.* 2, No. 3, 7(1939).—A no. of curves are given of potentiometric titrations (with quinhydrone electrode) of the natural salt solns. (well water, Chusovskiĭ and Beyuk-Shorskiĭ saline waters, etc.). All solns. investigated possessed considerable buffer properties, which were caused by the presence of salts of weak org. acids. The accuracy of the detns. was very low. Curves of parallel detns. varied greatly; this may be explained by the inconstancy of the compn. of the solns. The surface tensions in a no. of cases were greatly lowered (in spite of a large concn. of the salts) by the presence of org. compds. The characteristics of waters, of different depths and concns., depending on their chem. compn. and origin, are shown. Causes detg. their pH values (hydrolysis, equil. between CO_2 and the carbonates, etc.) are discussed.

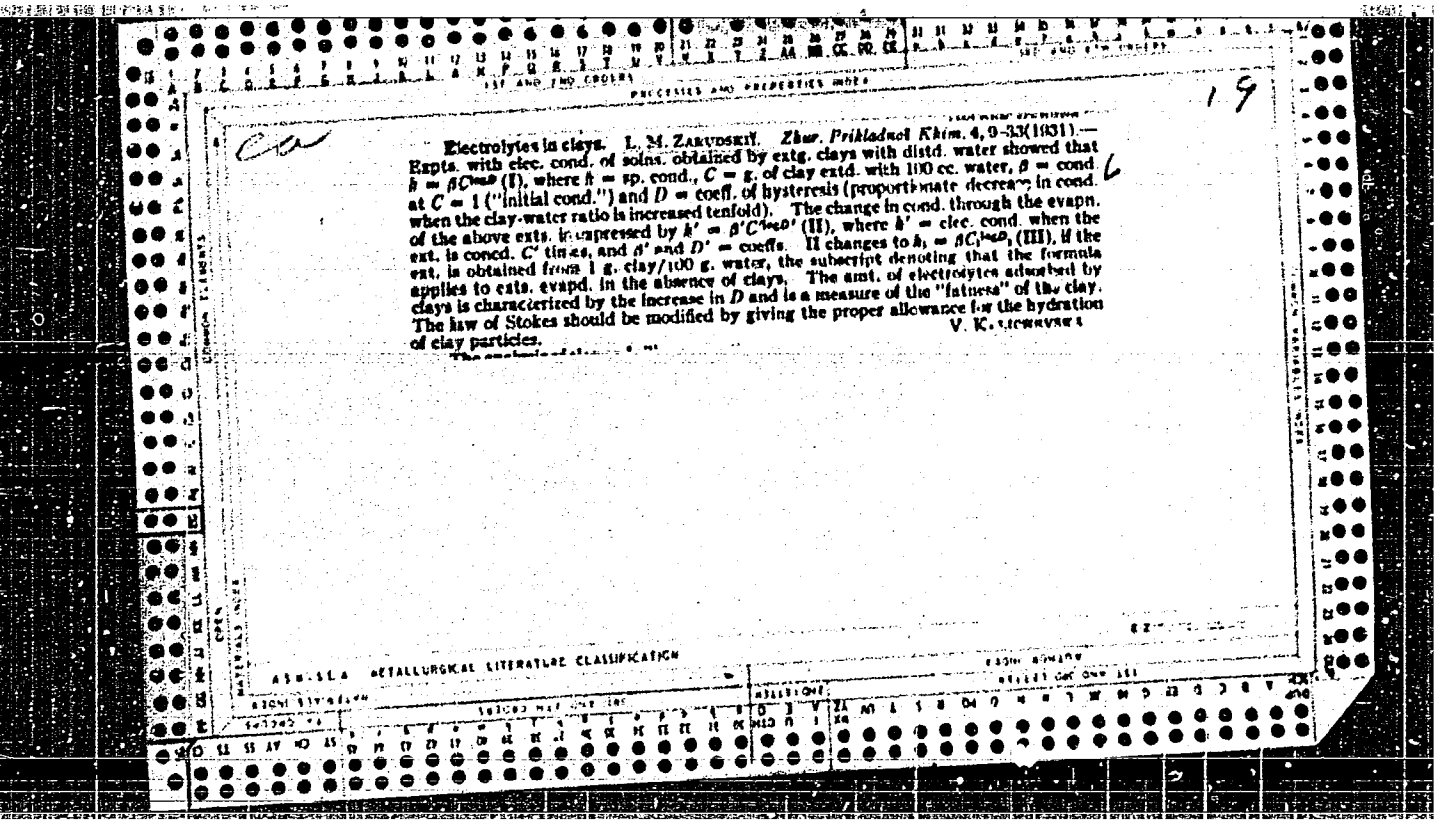
W. R. Henn



CA 12

Foam formation in natural salt solutions and its prevention. L. M. Zarudskii and T. V. Korobochkina. *Byull. Inst. Halurgii* 1938, No. 3, 13-20; *Khim. Referat. Zhur.* 3, No. 3, 97-8(1939).—The formation of foam is caused by the simultaneous presence of carbonates, org. substances and mech. admixts. Their removal from solns. decreases considerably or overcomes completely formation of foam and increases simultaneously the surface tension. To remove foam-forming substances, chlorinated $Fe_2(SO_4)_3$ was added to the soln. until its presence could be detected in the filtrate by means of $K_4Fe(CN)_6$. A scheme for the lab. expts. is given. W. R. Henn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Electrolytes in clays. L. M. Zaryoskii. *Zhur. Prikladnoi Khim.* 4, 9–33(1931).—Expts. with elec. cond. of solns. obtained by extg. clays with distd. water showed that $h = \beta C^{1-D}$ (I), where h = sp. cond., C = g. of clay extd. with 100 cc. water, β = cond. at $C = 1$ ("initial cond.") and D = coeff. of hysteresis (proportionate decrease in cond. when the clay-water ratio is increased tenfold). The change in cond. through the evapn. of the above exts. is expressed by $h' = \beta' C^{1-D'}$ (II), where h' = elec. cond. when the ext. is concd. C' times, and β' and D' = coeffs. If changes to $h_1 = \beta C_1^{1-D}$ (III), if the ext. is obtained from 1 g. clay/100 g. water, the subscript denoting that the formula applies to exts. evapd. in the absence of clays. The amt. of electrolytes adsorbed by clays is characterized by the increase in D and is a measure of the "fatness" of the clay. The law of Stokes should be modified by giving the proper allowance for the hydration of clay particles.

V. K. [illegible]

ZARUDNYY, N.N.

Relation of volcanism to vibratory tectonic movements in the northeastern U.S.S.R. Izv.vys.ucheb.zav.; geol. i razv. 8 no.1: 19-34 Ja '65. (MIRA 18:3)

1. Institut geologii i razrabotki goryuchikh iskopayemykh.

REZANOV, I.A.; ZARUDNYY, N.N.

Crustal structures in the northeastern U.S.S.R. Sov. geol. 8 no.1:35-53 Ja '65. (MIRA 18:3)

1. Institut fiziki Zemli AN SSSR.

ZARUDZKI, W.

ZARUDZKI, W. Necessity of applying proper geodetic plans for electric-power investments. p. 459.
Report on the activities of the Polish Electrical Engineers Association for the first quarter of 1955. p. 459.

Vol. 31, No. 7, July 1955
PRZEGLAD ELEKTROTECHNICZNY
TECHNOLOGY
Poland

So: East European Accession, Vol. 5, No. 5, May 1956

ZARUKIN, G.V.

Some problems in the wear of parts of mine pumps and piping.
Trudy Alt. GMNII AN Kazakh. SSR 15:158-168 '63. (MIRA 17:3)

MIL'CHENKO, D.V., gornyy inzh.; ZARUKIN, G.V., gornyy inzh.;
PODCHERNIN, P.K., gornyy inzh.

Operation of main mine pumping systems with small capacity sumps. Gor. zhur. no. 11:60-62 N '60. (MIRA 13:10)

1. Maslyanskiy rudnik Zyryanovskogo svintsovogo kombinata.
(Mine drainage)

Zaruma, D. E.

S/079/60/030/05/44/074
B005/B016

AUTHORS: Bankovskiy, Yu. A., Feistova, L. A., Zaruma, D. E.

TITLE: Synthesis of 5-Bromo Quinoline

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 5, pp. [illegible]

TEXT: The production of 5-bromo quinoline from m-bromo aniline by means of the Skraup synthesis requires a long distillation with water vapor. Afterwards, the 5-bromo quinoline must be extracted with ether from large quantities of the distillate. Besides, an about equal quantity of [illegible] 7-bromo quinoline is formed the complete separation of which is very difficult. The yield in pure 5-bromo quinoline in this synthesis is not more than 10-20% (calculated for m-bromo aniline). Also the synthesis of 5-bromo quinoline by diazotation of 5-aminoquinoline and substitution of bromine for the diazo group (Ref. 2) shows several shortcomings which are discussed in the present paper. The authors devised a method of synthesizing 5-bromo quinoline on the basis of 8-aminoquinoline. According to N. N. Vorozhtsov and I. M. Kogan (Ref. 6), 8-aminoquinoline can also be obtained easily by amination of 8-hydroxyquinoline with ammonia in the

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presence of ammonium bisulfite. G. I. Mikhaylov (Ref. 7) improved this method, and was able to raise the yield of 8-aminoquinoline to 81-83%. The authors used this method for the preparation of 8-aminoquinoline. The synthesis of 5-bromo quinoline devised is accomplished as follows: 8-aminoquinoline is acetylated in benzenic solution with acetic anhydride. 8-Acetylaminoquinoline which results in good yield is not isolated but brominated in the resultant reaction mixture at 0-2°C. In this way, 5-bromo-8-acetylaminoquinoline is obtained in yields up to 55.5%. By hydrolysis with hydrochloric acid, the acetyl group is split off. The resultant 5-bromo-8-aminoquinoline is diazotized in sulfuric acid solution at -2°. By reduction with copper powder and alcohol, the diazo group is replaced by hydrogen, and 5-bromoquinoline results as end product in a yield of 40-51%. In an experimental part, the total course of synthesis is described in detail. The scheme of the synthesis is given as well. There are 11 references, 4 of which are Soviet.

ASSOCIATION: Institut khimii Akademii nauk Latviyskoy SSR (Institute of Chemistry of the Academy of Sciences, Latviyskaya SSR)

Card 2/3

SUBMITTED: May 22, 1959

Card 3/3

BANKOVSKIY, Yu.A.; FEDOTOVA, L.A.; ZARUMA, D.E.

Synthesis of 5-bromoquinoline. Zhur.ob.khim. 30 no.5: 1614-1616 My '60 (MIRA 13:5)

1. Institut khimii Akademii nauk Latviyskoy SSR.
(Quinoline)

PIMENOVA, V.M.; ZARUTSKAYA, A.V.

Coordination of reference and bibliographical work on technology. NTI no.3:10-12 '63. (MIRA 16:11)

ZARUTSKAYA, I.P., redaktor.

[Map of the U.S.S.R.] Karta SSSR. Pod obshchei red. Zarutskoi, I.P. [Moskva? 1946?] 32 maps. (MLRA 7:11)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.
(Russia--Maps)

ZARUTSKAYA, I. P.

21367 ZARUTSKAYA, I. P. O Metodike izobazheniya rel'efa Na gipsometricheskoy karte SSSR u masshtabe 1: 2500 000. - V ogl: N. P. Zarukaya. Voprosy Geografii, SB. 11, 1949, S. 73-94.

SO: Letopis' zhurnal'nykh Statey, No. 29, Moskva, 1949.

ZARUTSAYA, I. P.

21366 ZARUTSAYA, I. P. Gipsometrich eskaya karta SSSR u masshtabe 1: 2500 000. Trudy vtorogo usesoyuz. Geogr. S"ezda. T. III. M., 1949, S. 67-81.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

ZARUTSKAYA, I. P.

188T36

USSR/Geophysics - Hypsometry Jan 51

"Hypsometric Map of USSR," I. P. Zarutskaya

"Iz Ak Nauk SSSR, Ser Geog" No 1, pp 74-76

Subject map, drawn to scale 1 : 2,500,000, was published in 1949 by the Main Adm of Geodesy and Mapping. It shows elevations of the whole territory of USSR, and those of boundary states and all seas enveloping the USSR.

188T36

ZARUTSKAYA, I.P. Docent, SALISHCHEV, K.A., Prof.

"Geographical Maps for Higher Schools," a paper given at the All-University Scientific Conference "Lomonosov Lectures", Vest. Mosk. Un., "o.8, 1953.

Translation U-7895, 1 Mar 56

ZARUTSKAYA, I. P.

ZARUTSKAYA, I. P.: "Methods of comparing relief on hypsometric small-scale maps." Moscow Order of Lenin State U imeni M. V. Lomonosov. Moscow, 1955. (DISSERTATION For the Degree of Candidate in GEOGRAPHICAL SCIENCES.)

So: Knizhnaya letopis' No 24 1956

ZARUTSKAYA, I. P.

(Cand. Geographical Sci.)

"The cartographing of natural conditions in the USSR," Geodeziya i Kartografiya, 1957, Nr 12, pp. 69-70 (USSR).

report presented at the Sci. Tech. Conf. for Geodesy, Aerial Photography and Cartography, 24-28 Oct 57, in honor of 40th Anniv of October Revolution, Organized by Main Office for Geodesy and Cartograhy, Home Office USSR, the Military-Topographical Office and Inst. for Engineers of Geodesy, Air Survey and Cartography, Moscow.

3(4) PHASE I BOOK EXPLOITATION SOV/2017

Zarutskaya, Irina Pavlovna

Metody sostavleniya rel'yefa na gipsometricheskikh kartakh (Methods of Compiling Relief on Hypsometric Maps) Moscow, Geodezizdat, 1958. 214 p. Errata slip inserted. 3,000 copies printed.

Ed.: V.S. Volynskaya; Ed. of Publishing House: T.A. Shamarova; Tech. Ed.: M.V. Botvinko.

PURPOSE: This book is intended for cartographers, geographers, and teachers of mapping courses in vuzes and tekhnikums.

COVERAGE: The entire text, with minor exceptions, is devoted to problems of proper relief portrayal on hypsometric maps. A history of early hypsometric maps and the development of the hypsometric method in Soviet cartography is given in the first two chapters. General problems of compiling and editing hypsometric maps are discussed in detail. A chapter is devoted to the treatment of

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Methods of Compiling Relief (Cont.) SOV/2017

special relief features, such as plains of denudation and mountain relief. Finally, the process of generalization for improved topographic representation is explained. There are 136 references, 121 of which are Soviet, 9 English, 4 German, and 2 French.

TABLE OF CONTENTS:

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ZARUTSKAYA, I.P.

Plan of the new series of special maps of world natural conditions and resources. Vop.geog. no.42:126-138 '58. (MIRA 11:11)
(Physical geography--Maps)

BASHENINA, N.V.; LEONT'YEV, O.K.; SIMONOV, Yu.G.; VYSKHODENTSEVA, V.S.; ZARUTSKAYA, I.P.

Classification of land forms and legend for large-scale geomorphological maps. Sov.geol. 1 no.11:54-75 N '58. (MIRA 12:4)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Physical geography--Maps)

ZAKOTSKAYA, I. P.

AUTHOR: Podobedov, N. S., Docent SOV/154-58-2-[illegible]

TITLE: Chronicle (Khronika) I

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka, 1958, Nr 2, pp 107-109 (USSR)

ABSTRACT: More than 500 specialists participated in the scientific and technical conference on geodesy, aerophotography, and carto-graphy held from October 24 to 28, 1957. The following persons spoke in the plenary sessions of the conference: A. N. Baranov, Head of the GUGK, on: "Soviet Geodesy, Aerophotography, and Cartography over the Past Forty Years." A. S. Nikolayev, Major-General of the Technical Troops: "The Part Played by Geodesy in the Defense of the USSR." Professor G. V. Romanovskiy: "The Present State and Perspective Development of Aerophotography in the USSR." Professor P. S. Zakatov: "The Present State and Fun-damental Tasks of Geodetic Instruction in the USSR." Docent N. S. Podobedov: "Today's Topographical Maps and the Fundamental Problems and Ways of Perfecting the Maps." Yu. D. Bulanzhe, Doctor of Physical-Mathematical Sciences: "Soviet Participation in the International Geophysical Year." In the section on geo-desy reports were given by the following persons: V. A.

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Velichko, Candidate of Technical Sciences, reported on "The Use of Light Locations for the Establishment of Geodetic Nets." S. V. Yeliseyev, Docent, spoke on "The Tasks and Present State of Production of Geodetical Instruments." Docent A. K. Kuznetsov reported on "The Present State and Possibilities of Development of Astronomy." Engineer V. I. Shillinger spoke on "The Present State and Possibilities for Development of Terrain Leveling Instruments." In the section on aerophotographical geodesy Professor M. D. Konshin gave a lecture on "The Deter-mination of the Outer Orientation of Flying Elements, and Meth-ods for Evaluating the Precision of the Instruments Used." Docent A. I. Shershen' reported on "The Basic Tasks of Further Developing Aerial Cameras." Engineer Y. D. Kargopolov spoke on "The Rectification of Photogrammetrical Nets." L. M. Go[illegible]chaya, Candidate of Geographical Sciences, dealt with the problems of topographical deciphering of aerial photographs. In the section on cartography Docent P. A. Siarostin spoke on "The Fundamental Problems of Mathematical Cartography." Professor Yu. V. Filippov discussed the achievements and prospects in the field of maps and atlases in the USSR. P. K. Koldayev, Candidate of Technical Sciences, spoke on "Ways and Means for Perfecting the Stereo-scopic Reproduction of the Map Relief." Docent I. P. Zarutskaya spoke on "Cartographing Climatic Conditions in the USSR." N. P. Bardyukov, Candidate of Technical Sciences, re-ported on "Non-Argentiferous Photosensitive Layers and Trans-parent Bases in Cartography." Engineer B. A. Merkulov spoke on "The Application of Microfilm Photographs in Cartography."

SEMENOV, A.I., otv.red.; FILIPPOV, Yu.V., prof., doktor tekhn.nauk, red.; BASHLAVIN, V.A., kand.tekhn.nauk, red.; VOYNOVA, V.V., red.; GURARI, Ye.L., kand.ekonom.nauk, red.; GURZVICH, I.V., red.; ZHIV, I.S., red.; ZARUTSKAYA, I.P., red.; ZASLAVSKIY, I.I., red.; KOZLOV, F.M., red.; NIKISHOV, M.I., kand.geograf.nauk, red.; SADCHIKOV, S.F., red.; TIKHOMIROV, D.I., red.; TUTOCHKINA, V.A., red.; BALANTSEVA, I.A., red. kart; BOGDANOVA, L.A., red.kart; BOCHAROVA, I.L., red.kart; VENEVTSEVA, G.P., red.kart; VOLKOVA, A.P., red.kart; GOSTEVA, N.A., red.kart; YEFIMOVA, G.N., red.kart; ZHIV, D.I., red.kart; KRAVCHENKO, A.V., red. kart; KUBRIKOVA, N.S., red.kart; KUZNETSOVA, N.A., red.kart; KURSAKOVA, I.V., red.kart; LOBZOVA, N.A., red.kart; MERTSALOVA, L.M., red.kart; MOSTMAN, S.L., red.kart; PANFILOVA, M.V., red.kart; SEMENOVA, V.D., red.kart; SMIRNOVA, T.N., red.kart; TERESHKOVA, V.S., red.kart; FEDOROVSKAYA, G.P., red.kart; FETISOVA, N.P., red.kart; FIL'CUS, Z.Kh., red.kart; SHAPIRO, Ye.M., red.kart; SHISHKIN, Ye.A., red.kart; YASHUNICHKINA, Ye.G., red.kart. V razrabotke kart prinimali uchastiye: ALISOV, B.A., prof.; BERZINA, N.Ya.; VASILEVSKIY, L.I.; GAVRILOVA, S.A., kand.geograf.nauk; GINZBURG, G.A., kand.tekhn.nauk; DOBOSHINSKAYA, I.B.; YEVSTIGNEYEVA, A.I.; LAVRENKO, Ye.M., prof.; LOZINOVA, V.M., kand. tekhn.nauk; MILANOVSKIY, Ye.Ye., kand.geologo-mineral.nauk; MIKHAYLOV, A.A., prof.; MYSHKIN, Ye.P.; PUZANOVA, V.F., kand.geograf.nauk;

(Continued on next card)

SEMENOV, A.I.---(continued) Card 2.
ROZOV, N.N., prof.; SMIRNOV, D.I.; TARASOV, A.P.; TROFIMOVSKAYA, Ye.A., kand.geograf.nauk; TUGOLESOV, D.A., kand.geologo-mineral. nauk. ZININ, I.F., tekhn.red.

[Geographical atlas for secondary school teachers] Geograficheskii atlas; dlia uchitelei srednei shkoly. Izd.2. Moskva, Glav.upr. geodezii i kartografii MVD SSSR, 1959. 191 p. (MIRA 12:11)

1. Predstavitel' Nauchno-issledovatel'skogo institute metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for Zaslavskiy). 2. Predstavitel' Upravleniya shkol Ministerstva prosvyashcheniya RSFSR (for Tutochkina). 3. Chleny-korrespondenty AN SSSR (for Lavrenko, Mikhaylov).

(Maps)

ZARUTSKAYA, I.P., kand. geogr. nauk dots.

Cartography of natural conditions in the U.S.S.R. Trudy MIIGAIK no.31:103-111 '59. (MIRA 13:3)
(Russia--Maps, Physical)

ZARUTSKAYA, IRINA P.

"The Tendencies of Development in Soviet Hypsometric and Geomorphologic Maps"

report to be submitted for the Intl. Geographical Union, 10th General Assembly and 19th Intl. Geographical Congress, Stockholm, Sweden, 6-13 August 1960.

BASHENINA, Nina Viktorovna; LEONT'YEV, Oleg Konstantinovich; PIOTROVSKIY, Mikhail Vladimirovich; SIMONOV, Yuriy Gavrilovich; VYSKREBENTSEVA, V.S.; ZAMUTSKAYA, I.P.; Prinimali uchastiye ZORIN, L.V.; ORLOV, I.V.; ZVONKOVA, T.V.; FEDOROVICH, B.A.; SHATALOV, Ye.T., retsenzent; GLAZOVSKAYA, M.A., retsenzent; ARISTARKHOVA, L.B., retsenzent; YERMAKOV, M.S., tekhn. red.

[Methodological guide to geomorphological mapping and the carrying out of geomorphological surveys at scales of 1:50 000 - 1:25 000 (with legend)]Metodicheskoe rukovodstvo po geomorfologicheskomu kartirovaniiu i proizvodstvu geomorfologicheskoi s"emki v masshtabe 1:50 000 - 1:25 000 (s legendoi). Pod red.N.V.Basheninoi. Moskva, Izd-vo Mosk.univ., 1962. 202 p. ___ [Legend; supplements VIII-[XI]]Legenda geomorfologicheskoi karty Sovetskogo Soiuza masshtaba 1:50 000 - 1:25 000; prilozhenie VIII-[XI] 1960. 25 p. (MIRA 15:7)

(Geomorphology--Maps)

SALISHCHEV, K.A.; ZARUTSKAYA, I.P.; KOMKOV, A.M.

Cartographical exhibitions at the 19th International Geographical Congress. Izv. AN SSSR. Ser. geog. no.1:138-141 Ja-F '61. (MIRA 14:2)

(Cartography—Exhibitions)

BASHENINA, N.V.; ZARUTSKAYA, I.P.

Fourth International Conference of the Subcommission on Geomorphological Mapping. Vest. Mosk. un. Ser. 5: Geog. 20 no.5:84-86 S-O '65. (MIRA 18:12)

BARANOV, A.N.; ZARUTSKAYA, I.P.; KUDRYAVTSEV, M.K.; RYABCHIKOV, A.M., prof.

The outstanding Soviet cartographer Konstantin Alekseevich Salishchev; his 60th birthday and 40th anniversary of his scientific activities. Vest. Mosk. un. Ser. 5: Geog. 20 no.5: 80-82 S-O '65. (MIRA 18:12)

ZARUTSKAYA, L.S.

Biology of the flowering and fruiting of Polygonum coriarium Grig. Vop. biol. i kraev. med. no.4:177-186 '63. (MIRA 17:2)

ZARUTSKAYA, V.G. ZARUTSKAYA, V. G. FD 131

USSR/Medicine - Dysentery

Card 1/1

Authors : *Ravich-Birger, Ye. D. and Zarutskaya, V. G.

Title : Data concerning the investigation of the Sonne bacillus. I. Microbiological characteristics of Sonne dysentery microorganisms

Periodical : Zhur. mikrobiol. epid. i immun. 4, 40-45, Apr 1954

Abstract : This is the first in a series of 3 reports on the Sonne dysentery bacillus. It discusses the microbiological characteristics of 2 types of colonies formed by Sonne dysentery bacilli, i.e. a round form and a flat form. It shows that, although these 2 forms are morphologically distinct, their fermentative activity, virulence, and toxicity are almost identical. It indicates the value of these characteristics in diagnosis and in the identification of the Sonne bacilli. The report is illustrated by 4 photographs and the results of the microbiological investigations are presented on 3 graphs. No references are cited.

Institution : Moscow Scientific-Research Institute of Vaccines and Serums (Director - M. G. Kashtanova, Scientific Head - V. A. Chernokhvostov, Head of the Division of Intestinal Infections - *Ye. D. Ravich-Birger)

Submitted : July 3, 1953

ZARUTSKAYA, V. G.: Master Med Sci (diss) -- "The distribution and methods of detecting dysentery microbes in the external environment". Moscow, 1959. 12 pp (Min Health USSR, Central Inst for the Advanced Training of Physicians), 200 copies (KL, No 11, 1959, 122)

ZARUTSKAYA, V.G.

Survival of Zonne's and Flexner's bacteria in certain food products. Gig. i san. no.9:47-48 S '54. (MIRA 7:10)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok.

(SHIGELLA,
dysenteriae, in food)
(FOOD, bacteriology,
Shigella dysenteriae)

ZARUTSKAYA, V.G.

Repeated utilization of 'Zh' and 'P' bacterial agar. Lab.delo no.1: 20-22 Jan-Feb.'55. (MLRA 8:8)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny (dir.M.G. Kashtanova, nauchn.rukovoditel'-prof. V.A.Chernokhvostov, zav.otdelom-prof. E. D. Ravich-Birger)

(AGAR,
reuse)

FUKS, Boris Abramovich; AYZENBERG, L.A., red.; ZARUTSKAYA, V.V., red.; PLAKSHE, L.Yu., tekhn. red.

[Theory of analytic functions of several complex variables] Teoriia analiticheskikh funktsii mnogikh kompleksnykh peremennykh. Izd.2., perer. i dop. Moskva, Fizmatgiz. Vol.2. [Special chapters on the theory of analytic functions of several complex variables] Spetsial'nye glavy teorii analiticheskikh funktsii mnogikh kompleksnykh peremennykh. 1963. 427 p. (MIRA 16:10)

(Functions, Analytic)

RUTISKHAUZER, G. [Rutishauser, Heinz], prof.; KUROCHKIN, V.M. [translator]; ZARUTSKAYA, V.Y., red.; POTAPENKOVA, Ye.S., tekhn.red.

[Algorism of quotients and differences] Algoritm chastnykh i raznostei. Moskva, Izd-vo inostr.lit-ry, 1960. 93 p. Translated from the German. (MIRA 14:4)

1. Die Eidgenössische Technische Hochschule in Zürich (for Rutiskhauzer).
(Algorism) (Electronic calculating machines)

YEVGRAFOV, Marat Andreyevich; ZARUTSKAYA, V.V., red.

[Analytic functions] Analiticheskie funktsii. Moskva, Nauka, 1965. 423 p. (MIRA 18:4)

ZARUTSKIY, I. V., ed.

Agriculture in Turkmen SSR for a period of 25 years Ashkhabad, Turkmengosizdat, 1950. 91 p. (51-20112)

S471.A9Z5

ZARUTSKIY, Ivan Pavlovich; KONDRAT'YEV, Yu.P., red.; ALABYSHEVA, N.A., red.izd-va; GVIRTS, V.L., tekhn. red.

[Mechanization of lost-wax molding processes] Mekhanizatsiia izgotovleniia lit'ia po vyplavliaemym modeliam. Leningrad, 1963. 18 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Liteinoe proizvodstvo, no.4) (MIRA 17:4)

ZARUTSKIY, K.M. [Zaruts'kyi, K.M.]

Relief of the bed of the Pre-Quaternary sedimentary cover of the right bank of the middle Dnieper Valley. Do. AN URSR no.5:649-652 '64. (MIRA 17:6)

1. Institut geologicheskikh nauk AN UkrSSR. Predstavleno akademikom AN UkrSSR V.G.Bondarchukom [Bondarchuk, V.H.].

ZARUTSKIY, K.M. [Zaruts'kyi, K.M.]

Mineralogical composition of the Buchak continental sediments of the right-bank area of the middle Dnieper. Dop. AN URSR no.11:1510-1512 '65. (MIRA 18:12)

1. Institut geologicheskikh nauk AN UkrSSR.

DELIMARSKIY, Yu.K.; ZARUBITSKIY, O.G.

Cathodic refining of tin in melts. Ukr. khim. zhur. 31 no.4: 417-418 '65. (MIRA 18:5)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

L 45665-66 EWT(m)/T DS

ACC NR: AP6025461 (A) SOURCE CODE: UR/0080/66/039/007/1475/1481

36
B

AUTHOR: Zarubitskiy, O. G.

ORG: Institute of General and Inorganic Chemistry, AN UkrSSR (Institut obschey i neorganicheskoy khimii AN UkrSSR)

TITLE: Anodic polarization and potential vs time dependence

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 7, 1966, 1475-1481

TOPIC TAGS: anodic oxidation, electrode potential, metal coating, metal oxidation, corrosion protection, corrosion

ABSTRACT: Anodic polarization and electrode potential vs time dependence (0-200 minutes) was studied for several metals in liquid and solid state in molten sodium hydroxide at 340 ± 2°C. For W, Mo, and Cd, the electrode potential was found to reach a constant level rapidly and then remain constant with time. For Pb, Bi, and Cu, the electrode potential was found to reach a constant level slowly. Such metals as Ag, An, Pt, Fe, Ni, Ta, Nb, and Zr were found to be air-oxygen electrodes. At 340°C in molten NaOH, the following electrochemical order of metals was established: W, Mo, Cd, Pb, Bi, Cu, Ag, An, Pt, Fe, Ni, Ta, Nb, and Zr. The authors thank Yu. K. Delimarkiy for valuable advice and instructions given during the investigation. Orig. art. has: 9 figures.

SUB CODE: 07/ SUBM DATE: 22Jun64/ ORIG REF: 012/ OTH REF: 012

UDC: 541.13

Card 1/1 fv

GRACH'YAN, A.N.; ZARUTSKIY, S.A.; STEPANOVA, A.I.; ZUBEKHIN, A.P.; DYADISHCHEV, N.I.

Increasing the whiteness of cement clinker. TSement 28 no.1:11 Ja-F '62. (MIRA 16:5)

(Cement clinkers)

VAYNBERG, D.V. (Kiyev); ZARUTSKIY, V.A. [Zaruts'kyi, V.O.] (Kiyev);
ITENBERG, B.Z. (Kiyev)

Stressed state of cylindrical shells reinforced with ribs. Prykl. mekh. 6 no.4:375-384 '60. (MIRA 13:11)

1. Institut stroitel'noy mekhaniki AN USSR.
(Elastic plates and shells)

ZARUTSKIY, V.O.

29224

10.6000 also 1327, 1103

S/198/61/007/005/005/015
D274/D303

AUTHOR: Zaruts'kyy, V.O. (Kyyiv)

TITLE: Equilibrium equations of stiffened cylindrical shells; their approximate solution

PERIODICAL: Prykladnaya mekhanika, v. 7, no. 5, 1961, 503 - 510

TEXT: The differential equations of equilibrium of stiffened cylindrical shells are derived, the width of the ribs (stringers) being taken into account. The obtained system of differential equations with variable coefficients is reduced to a system of ordinary differential equations with constant coefficients. A cylindrical shell, stiffened by stringers, is considered under arbitrary surface- and edge loads. It is assumed that the Kirchhoff-Love hypothesis applies to the shell, and that of plane sections - to the stringers. The components q of the external surface load, applied to the middle surface of the shell, are expressed in terms of the stresses between shell and stringers at their surface of contact. The displacements u, v, w of the stringers are expressed by the displacements

Card 1/6

Equilibrium equation of ...

of the corresponding points of the middle surface (ξ, θ), (by virtue of the compatibility equations). After transformations, one obtains the differential equations in the displacements:

$$\left(\frac{\partial^2}{\partial\xi^2}+\frac{1-\sigma}{2}\frac{\partial^2}{\partial\theta^2}\right)u+\frac{1+\sigma}{2}\frac{\partial^2 v}{\partial\xi\partial\theta}-\sigma\frac{\partial w}{\partial\xi}+\sum_{i=1}^{n}\left[\gamma_i\frac{d^4u(\xi,\theta_i')}{d\xi^4}+\right.$$
$$\left.+\gamma_i r\delta_i\frac{d^2\varphi_i(\xi,\theta_i')}{d\xi^2}\right]\Psi_i(\theta)+\frac{r^2}{2Eh}(1-\sigma^2)q_{x0}=0;$$
$$\frac{1+\sigma}{2}\frac{\partial^2 u}{\partial\xi\partial\theta}+\left(\frac{1-\sigma}{2}\frac{\partial^2}{\partial\xi^2}+\frac{\partial^2}{\partial\theta^2}\right)v-\frac{\partial w}{\partial\theta}-\sum_{i=1}^{n}\left[\lambda_{1i}\frac{d^4v(\xi,\theta_i')}{d\xi^4}+\right. \quad (1.12)$$
$$\left.+\lambda_{2i}r\frac{d^4\varphi_2(\xi,\theta_i')}{d\xi^4}+\mu_i r\frac{d^2\varphi_2(\xi,\theta_i')}{d\xi^2}\right]\Psi_i(\theta)+\frac{r^2}{2Eh}(1-\sigma^2)\bar{q}_{y0}=0;$$
$$-\sigma\frac{\partial u}{\partial\xi}-\frac{\partial v}{\partial\theta}+(1+a^2\Delta\Delta)w+\sum_{i=1}^{n}\left[\left[\eta_i\frac{d^4w(\xi,\theta_i')}{d\xi^4}-\right.\right.$$
$$\left.\left.-\eta_i r\frac{d^2\varphi_1(\xi,\theta_i')}{d\xi^2}-\delta_i\frac{d^2u(\xi,\theta_i')}{d\xi^2}\right]\Psi_i(\theta)+\left[\pi\mu_i r\frac{d^2\varphi_2(\xi,\theta_i')}{d\xi^2}+\right.$$

Card 2/6

Equilibrium equation of ...

$$+\lambda_{41}\frac{(d^4v(\xi,\theta_1^i)}{d\xi^4}+\lambda_{31}r\frac{d^4\varphi_3(\xi,\theta_1^i)}{d\xi^4}\Big]\frac{d\Psi_i(\theta)}{d\theta}\Big\}=\frac{r^2}{2Eh}(1-\sigma^2)\bar{q}_{i0}, \qquad (1.12)$$

where φ, γ, δ, λ, μ, ψ, η, are given by expressions. If $\theta_0^i = 0$, Eqs. (1.12) reduce to the analogous equations of the theory of stiffened shells with stringers of zero width. As an example, a cylindrical shell with stringers is considered, under axisymmetric loading. The stringers are at equal distances and have the same geometrical- and elastic characteristics. In this case, the stressed state of the shell has cyclic symmetry with angle $2\pi/n$. Hence the sought-for displacements can be expressed by infinite series:

$$u=\sum_{k=0}^{\infty}u_k(\xi)\cos kn\theta;\quad v=\sum_{k=1}^{\infty}v_k(\xi)\sin kn\theta;\quad w=\sum_{k=0}^{\infty}w_k(\xi)\cos kn\theta. \qquad (2.1)$$

The approximate solution of Eq. (1.12) is sought in the form

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Equilibrium equation of.....

$$u_{k_1} = \sum_{k=0}^{k_1} u_{kk_1}(\xi)\cos kn\vartheta; \quad v_{k_1} = \sum_{k=1}^{k_1} v_{kk_1}(\xi)\sin kn\vartheta; \qquad (2.2)$$

$$w_{k_1} = \sum_{k=0}^{k_1} w_{kk_1}(\xi)\cos kn\vartheta.$$

The displacements u, v, w are imparted to the shell; these displacements are determined from the condition

$$\int_0^{\frac{2\pi}{n}} (\vec{p}\vec{u}_{k_1})r\,d\vartheta = 0$$

where $\vec{p}$ is the surface-load vector and u is determined from Eq. (2.2) This condition is satisfied if

$$\int_0^{\frac{2\pi}{n}} p_1 u_{k_1} d\vartheta = 0; \quad \int_0^{\frac{2\pi}{n}} p_2 v_{k_1} d\vartheta = 0; \quad \int_0^{\frac{2\pi}{n}} p_3 w_{k_1} d\vartheta = 0. \qquad (2.4)$$

Card 4/6

Equilibrium equation of ...

Substituting (2.2) in (2.4), one obtains, in turn, the conditions under which (2.4) is satisfied, viz.:

$$\int_0^{\frac{2\pi}{n}} p_x \cos kn\theta\, d\theta = 0; \qquad \int_0^{\frac{2\pi}{n}} p_y \sin kn\vartheta\, d\theta = 0; \tag{2.5}$$

$$\int_0^{\frac{2\pi}{n}} p_z \cos kn\theta\, d\theta = 0 \quad k = 0, 1, 2, \ldots, k_1.$$

Thus, the system of three partial differential equations is reduced to $3k_1 + 2$ ordinary differential equations. The above method is an extension of L.V. Kantorovich's method for three variables, (Ref. 4: Priblizhenyye metody vysshego analize, GITTL, 1949). Further, a numerical example is considered. From this example it is evident that in determining the bending moments, the width of the stringers are of considerable importance. A comparison of the above computations with those based on the theory of structural-orthotropic

Card 5/6

Equilibrium equation of ...

shells shows that even in the case of stringers of comparatively small rigidity, this theory leads to a large error in the bending moments. There are 1 table and 4 Soviet-bloc references.

ASSOCIATION: Instytut mekhaniky AN URSR (Institute of Mechanics AS UkrSSR)

SUBMITTED: November 19, 1961

Card 6/6

ZARUTSKIY, V.A. [Zaruts'kyi, V.O.] (Kiyev)

Approximate equations of the equilibrium of structurally orthotropic cylindrical shells. Prykl.mekh. 7 no.6:677-680 '61. (MIRA 14:11)

1. Institut mekhaniki AN USSR.
(Elastic plates and shells)

ZARUTSKIY V.O.

37684
S/198/62/008/003/004/008
D407/D301

10.7000

AUTHOR: Zaruts'kyy, V.O. (Kyyiv)

TITLE: On calculating cylindrical shells, reinforced by stringers

PERIODICAL: Prykladna mekhanika, v. 8, no. 3, 1962, 271 - 281

TEXT: A circular cylindrical shell is considered, reinforced by stringers which are equally spaced and have similar geometrical- and mechanical characteristics. The shell is subjected to cyclic symmetrical loads with periodic $2\pi/n$ (n being the number of stringers). The equilibrium equation in the displacements is derived. The boundary conditions are obtained by means of the principle of virtual displacements. First, the case of a shell subjected to a surface load, is considered. If the shell is rigidly supported at the ends, the solution of the equilibrium equation is obtained in the form of double trigonometric series; this constitutes a particular solution of the equilibrium equation which can be used for the determination of the general solution, i.e. of the stressed-strained state of a shell, loaded at the ends. In this case one obtains an infinite sys-

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On calculating cylindrical shells, ...

tem of ordinary differential equations, which (in turn) yields a system of homogeneous algebraic equations; the latter system has a non-trivial solution if the (unknown) parameter χ is the solution of the algebraic equation of infinite order:

$$\chi^2 [1 + \gamma - \sigma^2 - 2\sigma\delta\chi^2 + [(\sigma^2 + \eta)(1 + \gamma) - \delta^2]\chi^4 + 2\alpha\chi^4 [\chi^2 L(\chi) + (1 + a^2\chi^4) F(\chi) - 2\sigma\chi^2 \mathcal{S}(\chi)] + [2\gamma\chi^2 L(\chi) - 4\delta\chi^2 \mathcal{S}(\chi) + 2\eta\chi^4 F(\chi) + 2\alpha\chi^6 [L(\chi) F(\chi) - \mathcal{S}^2(\chi)]] (1 - \sigma^2 + a^2\chi^4)] = 0, \quad (3.6)$$

(where L, $\mathcal{S}$, F, D_k and Δ_k are given by expressions). Determination of the displacements reduces to solving Eq. (3.6) and to the finding of the arbitrary constants A, B and C (obtained from the boundary conditions). Eq. (3.6) has only 2 zero solutions and no imaginary solutions. The zero solutions characterize the action of axisymmetric longitudinal end-stresses. The non-zero solutions characterize the attenuated stressed state of the shell. Thus, if the longitudinal stresses are absent, the end loads produce the boundary effect. In the general case, it is impossible to determine exactly all the solutions of Eq. (3.6). The author derives (provided certain conditions are satisfied) approximate solutions to Eq. (3.6).

Card 2/3

These conditions can be expressed by the inequality

$$a^2n^4 \gg 1, \qquad (3.13)$$

where $a^2 = h^2/3r^2$ (2h being the wall thickness, and r - the radius of curvature of the middle surface of the wall). If condition (3.13) is satisfied, then the algebraic equations and the boundary conditions can be simplified. Further, the theory of structurally-orthotropic shells is used for calculating reinforced shells. A formula is derived which expresses the sufficient condition for the applicability of that theory for the latter purpose. A numerical example is given which shows that the approximate solution which is much simpler than the exact one, yields satisfactory results; the theory of orthotropic shells, on the other hand, leads to large errors. There is 1 figure, 1 table and 2 Soviet-bloc references.

ASSOCIATION: Instytut mekhaniky AN URSR (Institute of Mechanics of the AS UkrRSR)

SUBMITTED: February 9, 1962

Card 3/3

D234/D303

AUTHOR: Zarutskiy, V. A. (Kiev)

TITLE: Equilibrium equations for ribbed cylindrical shells

[illegible] Trudy II Vsesoyuznoy konfe-

[illegible]

[illegible] and the solution is sought in the form

$$u = e^{\chi\varsigma} \sum_{k=0} A_k \cos k n\theta, \quad v = e^{\chi\varsigma} \sum_{k=1} B_k \sin kn\theta;$$

$$w = e^{\chi\varsigma} \sum_{k=0} C_k \cos kn\theta \qquad (2)$$

Card 1/3

Equilibrium equations for ...

The system of algebraic equations obtained in this way has a non-trivial solution if χ is a root of an equation of infinite order. Inequalities are quoted with which the roots of the latter ...

$$a^2 n^4 \gg \frac{4l}{a^2} \qquad (12)$$

is established as a criterion of [illegible]

Card 5/

ZAMUDSKIY, V.I.

Hermetic sealing of containers with preserved blood using viscose caps. Probl. gemat. i perel. krovi 9 no.4:54 Ag '64. (MIRA 18:3)

1. Belgorodskaya oblastnaya stantsiya perelivaniya krovi.

L 3899-66 EWT(d)/EWT(m)/EWP(k)/EWA(h)/EWA(m)-2/EWP(w)/EWP(v) IJP(c) RM/WW

ACC NR: AP6001243 (N) SOURCE CODE: UR/0198/65/001/011/0028/0038

AUTHOR: Zarutskiy, V. A. (Kiev) 21

ORG: Institute of Mechanics, Academy of Sciences UkrSSR (Institut mekhaniki Akademii nauk UkrSSR) B

TITLE: Equilibrium of stiffened cylindrical shells 24

SOURCE: Prikladnaya mekhanika, v. 1, no. 11, 1965, 28-38

TOPIC TAGS: cylindrical shell, cylindrical shell equilibrium, stiffened shell, stiffened cylindrical shell, edge effect, edge effect zone

ABSTRACT: A homogeneous system of integro-differential equations of equilibrium of longitudinally and laterally stiffened cylindrical shells is derived in terms of displacements, starting from their elastic-strain energy equations and compatibility conditions of the joint deformation of the skin-stiffener system, under the assumption that the theory of thin elastic shells is applicable to the skin, and the formulas of the strength of materials to the stiffeners. The shells are subjected to arbitrary surface and face-edge loading. The boundary conditions are formulated as conditions under which a variational equilibrium equation (in terms of external forces acting on

Card 1/2

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ACC NR: AP6001243

faces of stringers) becomes identity. By using these equilibrium equations and boundary conditions, the stress-and-strain state of the shell can be analyzed qualitatively, and the displacement components and stresses can be determined. The edge effect is investigated in a closed circular cylindrical shell stiffened by equally spaced identical stringers. The pattern of variation in the stress distribution with increasing distance from the edge (which is determined by the roots of the characteristic equation) is discussed and a formula for determining the extension of the edge-effect zone is derived; it is shown how much larger this extension is than the extension determined by the method of reducing a stringer-stiffened shell to a structurally orthotropic one. Orig. art. has: 9 formulas.

[VK]

SUB CODE: 20/ SUBM DATE: 21Sep64/ ORIG REF: 010/ OTH REF: 001/
ATD PRESS: 4191

Card 2/2

SOURCE CODE: UR/0258/65/005/005/0895/0906

AUTHOR: Zarutskiy, V. A. (Kiev)

ORG: none

TITLE: On designing stiffened cylindrical shells

SOURCE: Inzhenernyy zhurnal, v. 5, no. 5, 1965, 895-906

TOPIC TAGS: shell, cylindrical shell, stiffened cylindrical shell, stronger stiffened shell, longitudinally stiffened shell

ABSTRACT: The stress and strain distribution in a closed circular cylindrical shell stiffened by n equally spaced stringers having identical geometric and mechanical characteristics is considered. The shell is subjected to cyclically (period $2\pi/n$) symmetric loadings applied at the faces of the shell; the states of stress and strain possess the same cyclic symmetry. The derivation of equilibrium equations and boundary conditions (in which a discrete spacing of stringers is taken into account) by using the principle of virtual displacements is based on the following assumptions 1) the theory of thin elastic shells (considering a high index of variation) is applicable to the shell skin; 2) the strength-of-materials formulas are applicable to the stringers; and 3) the coupling of displacements of the stringer axes with displacements of corresponding points at the middle surface of the skin is expressed by given equations. The solution of the equilibrium equation satisfying the boundary

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UDC: 624.074

L 4412-66

ACC NR: AP5026689

conditions is sought in the form of a simple trigonometric series which leads to the solution of an infinite system of linear algebraic equations. The effect of the edge loading on the state of stress in the skin (membrane stresses combined with bending stresses having an "edge-effect" character in the vicinity of stringers is analyzed. An approximate method of solving the characteristic equation (the boundary problem) is given and the formulas for determining the displacement components of the shell are derived; the range of applicability of the method and its accuracy are discussed. As an example, expressions are derived for the deflection of a semi-infinite cylindrical shell stiffened by stringers and subjected to bending moments continuously distributed according to a certain law along its face edge. An analysis of this expression shows that the formulas of the theory of structurally orthotropic shells can be used in calculating the deflections of stiffened shells with certain geometric parameters. The distribution of bending moments in a longitudinal cross section of the shell is also determined. Orig. art. has: 1 figure, 29 formulas, and 1 table.

[VK]

SUB CODE: AS/ SUBM DATE: 03May63/ ORIG REF: 011/ OTH REF: 000/ ATD PRESS: 4/25

Card 2/2

L 39771-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6 IJP(c) WW/EM/GD-2

ACC NR: AP6014214 (A) SOURCE CODE: UR/0198/66/002/004/0017/0025 22

AUTHOR: Zarutskiy, V. A. (Kiev) 5

ORG: Institute of Mechanics, AN UkrSSR (Institut mekhaniki AN UkrSSR)

TITLE: Design of stiffened cylindrical shells under arbitrary loads

SOURCE: Prikladnaya mekhanika, v. 2, no. 4, 1966, 17-25

TOPIC TAGS: cylindric shell, stiffened shell, shell design

ABSTRACT: An expansion of previous qualitative analyses by the author on stress and strain distributions in closed circular cylindrical shells stiffened by equidistant identical stringers is presented, starting with the particular solution of a previously derived inhomogeneous system of differential equilibrium equations in displacements with associated boundary conditions; the loads acting on the surface and at the ends of the shell are arbitrary. The obtained displacements are presented as a sum of: a) displacements in a plain infinite shell; b) displacements in a plain shell of finite length; and c) displacements depending on the stiffness of stringers. The general solution of a homogeneous system of differential equilibrium equations in displacements is also given, and it is shown that the final solution of the

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ACC NR: AP6014214

problem can be obtained by using both particular and general solutions, and the boundary conditions for the stress and strain analyses of circular shells under a given type of loading. The qualitative results obtained show: 1) the dependence of the states of stress and strain in stiffened shells on the rigidity of stringers in tension, on their flexural rigidity in radial and tangential planes, and on torsional rigidity; 2) the length and character of the edge-effect zone caused by the end loads; and 3) the possibility of applying the equations of the theory of structurally orthotropic shells to the design of stiffened shells under arbitrary loading; a criterional formula is derived which represents the necessary and sufficient condition for such an application. Orig. art. has: 21 formulas. [VK]

SUB CODE: 20/ SUBM DATE: 12Jul65/ ORIG REF: 007/ ATD PRESS: 4244

Card 2/2 mlp

L 41150-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(k) IJP(c) WW/EM

ACC NR: AP6021546 (A) SOURCE CODE: UR/0198/66/002/006/0055/0062

30
3

AUTHOR: Zarutskiy, V. A. (Kiev)

ORG: Institute of Mechanics, AN UkrSSR (Institut mekhaniki AN UkrSSR)

TITLE: Use of double trigonometric series for designing finned cylindrical shells

SOURCE: Prikladnaya mekhanika, v. 2, no. 6, 1966, 55-62

TOPIC TAGS: cylindric shell structure, shell design, shell stability

ABSTRACT: Double trigonometric series are used to determine the stress-strain state of circular closed cylindrical shells reinforced by discretely distributed fins and subjected to the effect of cyclically symmetric loads. It is shown that as a result of using double trigonometric series it is possible to solve the problem of determining the stress-strain state of finned cylindrical shells and to calculate the forces, moments, and displacements with a preassigned accuracy. The calculation of the shells can be reduced to a solution of quasi-regular infinite systems of linear algebraic equations. Orig. art. has: 16 equations.

SUB CODE: 13/ SUBM DATE: 27Aug65/ ORIG REF: 007

Card 1/1 ZC

ZARUTSKIY, V.V.; ARAKELYAN, V.G.; OSTROVSKIY, S.A.; GOLOVKIN, G.V.

Improving the sensitivity of the detector in a Kh.T.-2M device.
Zav. lab. 30 no.10:1286 '64. (MIRA 18:4)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

GOLOVKIN, G.V.; PRYANISHNIKOVA, M.A.; KONONOV, N.F.; PLATE, A.F.; ZARUTSKIY, V.V.

Preparation of bicyclo[2,2,1]hepta-2,5-diene; effect of the nature of phlegmatizer, temperature, pressure, and cyclopentadiene feed rate. Izv. AN SSSR.Ser.khim. no.10:1850-1855 '65.

(MIRA 18:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

KASATKIN, A.G.; DYTNERSKIY, Yu.I.; ZARUTSKIY, V.V.; PETROV, G.G.; GORYACHEVA, R.V.

Separation of liquid homogeneous systems by means of polymeric films. Trudy MKHTI no.40:156-160 '63.

(MIRA 18:12)

LEPESHINSKAYA, V.N.; ZAHUTSKIY, Ye.M.

Penetration of ions of certain alkali metals into copper and silver. Izv. AN SSSR. Ser. fiz. 28 no.8:1390-1394 Ag '64 (MIRA 17:8)

1. Leningradskiy politekhnicheskiy institut.

ZARUTSKIY, Yu. F.

Cand Tech Sci - (diss) "Grid current, calculations, and design for electrometric tubes." Moscow, 1961. 15 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Power Inst); 150 copies; free; (KL, 5-61 sup, 189)

ZARUTSKIY, V. O

32564
S/198/61/007/006/008/008
D299/D301

ID.6000 1327

AUTHOR: Zaruts'kyy, V. O. (Kyyiv)

TITLE: Approximate equilibrium equations of structurally orthotropic cylindrical shells

PERIODICAL: Prykladna mekhanika, v. 7, no. 6, 1961, 677-680

TEXT: A thin shell is considered, stiffened by a large number of longitudinal ribs. An approximate system of equations is derived, based on V. Z. Vlasov's engineering theory of cylindrical shells. The stress function is introduced by means of the formula

$$T_1 = \frac{1}{r^2}\frac{\partial^2\varphi}{\partial\theta^2}\ ;\quad T_2 = \frac{1}{r^2}\frac{\partial^2\varphi}{\partial\xi^2}\ ;\quad S_1 = -\frac{1}{r^2}\frac{\partial^2\varphi}{\partial\xi\partial\theta} \qquad (5)$$

A system of equations for determining the unknown functions φ and w is obtained:

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$$\frac{\partial^2\varphi}{\partial\xi^2} - \frac{\delta}{1+\gamma-\sigma^2}\frac{\partial^2}{\partial\xi^2}\left[\frac{\partial^2\varphi}{\partial\vartheta^2} - \sigma\frac{\partial^2\varphi}{\partial\xi^2}\right] - \frac{2Eh^3}{3(1-\sigma^2)r}\left\{\left[1+\lambda - \frac{\delta^2}{\alpha^2(1+\gamma-\sigma^2)}\right]\frac{\partial^4 w}{\partial\xi^4} + 2\frac{\partial^4 w}{\partial\xi^2\partial\vartheta^2} + \frac{\partial^4 w}{\partial\vartheta^4}\right\} = r^3 Z, \quad (6)$$

$$\frac{\partial^2 w}{\partial\xi^2} - \frac{\delta}{1+\gamma-\sigma^2}\frac{\partial^2}{\partial\xi^2}\left[\frac{\partial^2 w}{\partial\vartheta^2} - \sigma\frac{\partial^2 w}{\partial\xi^2}\right] + \frac{1-\sigma^2}{2Ehr(1+\gamma-\sigma^2)}\times$$

$$\times\left[(1+\gamma)\frac{\partial^4\varphi}{\partial\xi^4} + 2\left(1+\frac{\gamma}{1-\sigma}\right)\frac{\partial^4\varphi}{\partial\xi^2\partial\vartheta^2} + \frac{\partial^4\varphi}{\partial\vartheta^4}\right] = 0.$$

$$\gamma = \frac{E_1\bar{F}_1}{2Eh}(1-\sigma^2);\ \delta = \frac{E_1\bar{A}_1}{2Ehr}(1-\sigma^2);\ \lambda = \frac{3E_1\bar{I}_1}{2Eh^3}(1-\sigma^2),$$

F_1, A_1 and I_1 being (respectively) the area, static moment and moment of inertia of the rib cross-section with respect to the θ-

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axis. Eq. (6) is solved separately for each m, the load being expressed in the form of trigonometric series in θ, for example $Z = \sum_{m=0}^{\infty} Z_m(\xi)\cos m\theta$; φ_m and w_m are sought in the form

$$\varphi_m = A_m e^{r_m \xi} \cos m\theta; \quad w_m = B_m e^{r_m \xi} \cos m\theta \tag{7}$$

Substituting Eq. (7) in Eq. (6), one obtains the characteristic equation

$$c_{1m} r_m^8 - c_{2m} r_m^6 + c_{3m} r_m^4 - c_{4m} r_m^2 + c_{5m} = 0 \tag{8}$$

where

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$$c_{1m} = (1+\gamma)(1+\lambda) - \frac{\delta^2}{a^2};$$

$$c_{2m} = 4m^2 + \frac{2m^2}{1-\sigma}\left[\gamma(2-\sigma) - \frac{\delta^2}{a^2} + \lambda(1+\gamma-\sigma)\right] + \frac{2\sigma\delta}{a^2}; \quad (9)$$

$$c_{3m} = \frac{1+\gamma-\sigma^2}{a^2} + 6m^4 + m^4\left[\lambda + \frac{5-\sigma}{1-\sigma}\gamma\right] - 2m^2\frac{\delta}{a^2};$$

$$c_{4m} = 4m^6\left[1 + \frac{\gamma}{2(1-\sigma)}\right]; \; c_{5m} = m^8.$$

A comparison between the coefficients (9) of Eq. (8) and the coefficients obtained on the basis of the exact theory shows that by using the approximate equations, the error does not exceed $1/m^2$. This leads to the conclusion that the error in determining the

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stressed state of the shell by means of Eqs. (6) and (7) is of the same order $(1/m^2)$. An analysis of Eq. (8) shows that the solution of Eqs. (9) can be simplified, as well as the characteristic equation; thereby V. Z. Vlasov's equation for the semi-membrane state of shells is obtained. For values of $a^2m^4\lambda \gg 1$, the characteristic equation degenerates: Thereby the equations corresponding to the degenerate state of shells are obtained. The use of Eq. (6) leads to a considerable simplification in analysis of the stressed state of shells. Analogous equations can also be obtained for shallow shells. There are 4 Soviet-bloc references.

ASSOCIATION: Instytut mekhaniky AN URSR (Institute of Mechanics AS UkrRSR)

SUBMITTED: August 1, 1960

Card 5/5

SHOSTAKOVSKIY, M.F.; CHEKULAYEVA, I.A.; KONONOV, N.F.; ZARUTSKIY, V.V.; OSTROVSKIY, S.A.; ARAKELYAN, V.G.

Triethanolamine vinylation reaction. Izv. AN SSSR. Ser. khim. no.4: 698-701 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

ACC NR: AT6004862 SOURCE CODE: UR/2563/65/000/255/0166/0171

AUTHOR: Berezin, G. N.; Zarutskiy, Ye. M.; Lepeshinskaya, V. N.

ORG: none

TITLE: Effect of cesium-ion bombardment upon the secondary-emission properties of alloy-type magnesium-oxide and beryllium-oxide emitters

SOURCE: Leningrad. Politekhnicheskiy inst'tut. Trudy, no. 255, 1965. Radioelektronika (Radio electronics), 166-171

TOPIC TAGS: secondary emission, photomultiplier, ion bombardment, magnesium oxide, beryllium compound, cesium, electron emission

ABSTRACT: Important for understanding the photomultiplier-fatigue phenomenon, an experimental investigation was organized of the effect of cesium-ion bombardment upon the secondary-electron-emission factor σ of magnesium-oxide and beryllium-oxide films that are formed as a result of activation of CuAlMg and CuAlBe alloys. Experimental curves of $\sigma(E_p)$, $\sigma_{max}/\sigma_{0\,max}$ vs. E_i and I_i for 10-, 30-, and 60-min bombardment in a 10^{-6}-torr vacuum are shown; E_i is the ion energy and I_i is the density of the ion beam. The fall-off of the $\sigma_{max}/\sigma_{0\,max}$ curve depends on the

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ACC NR: AT6004862

number of impinging ions rather than on their energies; this result is in agreement with G. E. I. Moore's data (J. Appl. Phys., 1959, v. 30, no. 7, pp. 1086-1100). Two experimental curves of the ion-electron emission factor $\gamma(E_1)$ and the ion-ion emission factor $K(E_1)$ show that γ increases linearly and K is practically independent of E_1. Orig. art. has: 5 figures.

SUB CODE: 20, 09 / SUPM DATE: none / ORIG REF: 003 / OTH REF: 003

Card 2/2

ZARUYEV, V., pilot

Practical training. Grazhd.av. 18 no.8:9 Ag '61. (MIRA 14:8)

1. Komandir eskadril'i Privolzhskogo upravleniya Grazhdanskogo vozdushnogo flota.

(Flight training)

Zaruyev, V. M.

"Determination of the Stress When Drawing Rods and Pipe", Stal', 1949, Nr 2.

ZARUYEV, V.M., dots.

Applying the law of least energy to determine the coefficient of draft in rolling with nonuniform reduction. Obr.met.davl. [no]: 27-32 '54. (MIRA 12:10)

1. Donetskiy industrial'nyy institut.
(Rolling (Metalwork))

Zaruyev, V. M.

"Determination of the Force of Friction of Metal on the Walls of the Cylindrical Part of the Die in Wire Drawing", Metiznoye Proizvodstvo, Sbornik Statey, Vol I, Metallurgizdat, Moscow, 1956.

SOV/137-57-11-22402

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 253 (USSR)

AUTHORS: Zaruyev, V. M., Prourzin, V. K.

TITLE: The Mechanical Properties of Nr 55S2 Steel at Elevated Temperatures (Mekhanicheskiye svoystva stali 55S2 pri vysokikh temperaturakh)

PERIODICAL: Tr. Donetsk. industr. in-ta, 1957, Vol 19, pp 5-7

ABSTRACT: The effect of test temperatures of from 20 to 1100°C upon σ_b, σ_s, and of Nr 55S2 steel is investigated to determine the optimum temperature for the end of the rolling operation. The specimens were first oil-hardened from 860° and tempered at 400° for 1 hour. It is found that in this case the σ_b of Nr 55S2 steel practically does not change up to 500° and then drops sharply. In the 820-900° test-temperature interval it is found that the decline in σ_b ceases, this being related to phase recrystallization and change in grain size. It is recommended that the temperature at the end of rolling and forging be held at $\geq$950°.

N. K.

Card 1/1

YEKTOV, I.M.; ZAKUYEV, V.M.; GUROV, S.A.; REVENKO, I.F.; V rabote prinim li uchastiye : KALMANOVICH, Yu.R.; GRIGOR'YEV, F.N.; KOSHELENKO, A.M.; LITVINENKO, Yu.P.; DMITRIYEV, V.D.; POLYAKOV, V.V.; PETUSHKOV, Ye.S.; FIRSOV, P.V.

Rolling double bulb-bar shapes with longitudinal cutting in the finishing mill. Stal' 20 no. 12:1113-1115 D '60. (MIRA 13:12)

1. Stalinskiy metallurgicheskiy zavod i Donetskiy politekhnicheskiy institut.
(Rolling (Metalwork))

TOVPENETS, Ya.S.; ZARUYEV, V.M.; GONCHARENKO, N.I.; BABIY, A.S.

Effect of heat treatment over the heating needed for rolling on the mechanical properties of mine rails. Izv.vys.ucheb.zav.; met. no.4:145-152 '60. (MIRA 13:4)

1. Donetskiy industrial'nyy institut.
(Railroads--Rails) (Steel--Heat treatment)

ZARUYEV, V.M.

124-58-6-7225

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 127 (USSR)

AUTHORS: Zaruyev, V.M., Prourzin, V.K.

TITLE: The Mechanical Properties of Steel 55S2 at Elevated Temperatures (Mekhanicheskiye svoystva stali 55S2 pri vysokikh temperaturakh)

PERIODICAL: Tr. Donetsk. industr. in-ta, 1957, Vol 19, pp 5-7

ABSTRACT: Results are given of an investigation made of the strength and ductility of steel 55S2 at temperatures up to 1100°C.

N.M.Dubrovin

1. Steel--Mechanical properties 2. Steel--Temperature factors

Card 1/1

ZARUYEV, V.M., dotsent.

Determining friction forces between the metal and the cylindrical part of the drawhole. Metiz.proizv.no.1:5-9 '56. (MLRA 10:2)

1. Donetskiy industrial'nyy institut.
(Drawing (Metalwork)) (Friction)

AID P - 5520

Subject : USSR/Aeronautics - Aircraft

Card 1/1 Pub. 58 - 11/17

Author : Zarva, B.

Title : Aviation without airfields

Periodical : Kryl. rod., 2, 20-22, F 1957

Abstract : A cursory review of the current attempts by Western airplane constructors to build aircraft capable of taking off and landing in absence of runways. The author goes over a number of new (chiefly American) models of such aircraft, showing the characteristic traits of their design. The article is said to be based on information gathered from foreign publications. 12 designs.

Institution : None

Submitted : No date